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(58) Field of search
A1E

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(54) Plant pots

(57) A plant pot 10 comprises a soil-containing portion 10 and a water reservoir portion 14. Formed integrally with and extending upwardly from the base of the reservoir portion 14 are two arcuate flanges 22, 23. A removable partition 27 separates the soil containing portion 10 and the water reservoir portion 14 and comprises a disc 28 with a plurality of perforations 44. Extending downwardly from the disc is a tube which fits over the flanges 22, 23 leaving a small gap 54 between the flanges and the tube.

When the reservoir is supplied with water via a tube 48 which passes through the soil and the portion 27, water is drawn into the gap 54 by capillary action, communicates with the soil through gaps 42 in the partition 27, and the soil is thus watered. Excess water in the soil drains back into the reservoir portion 14 through the perforations 44 in the disc 28.

Alternatively, the tube 32*a* extending downwardly from partition 27 may be arranged to fit inside the flanges 22, 23.

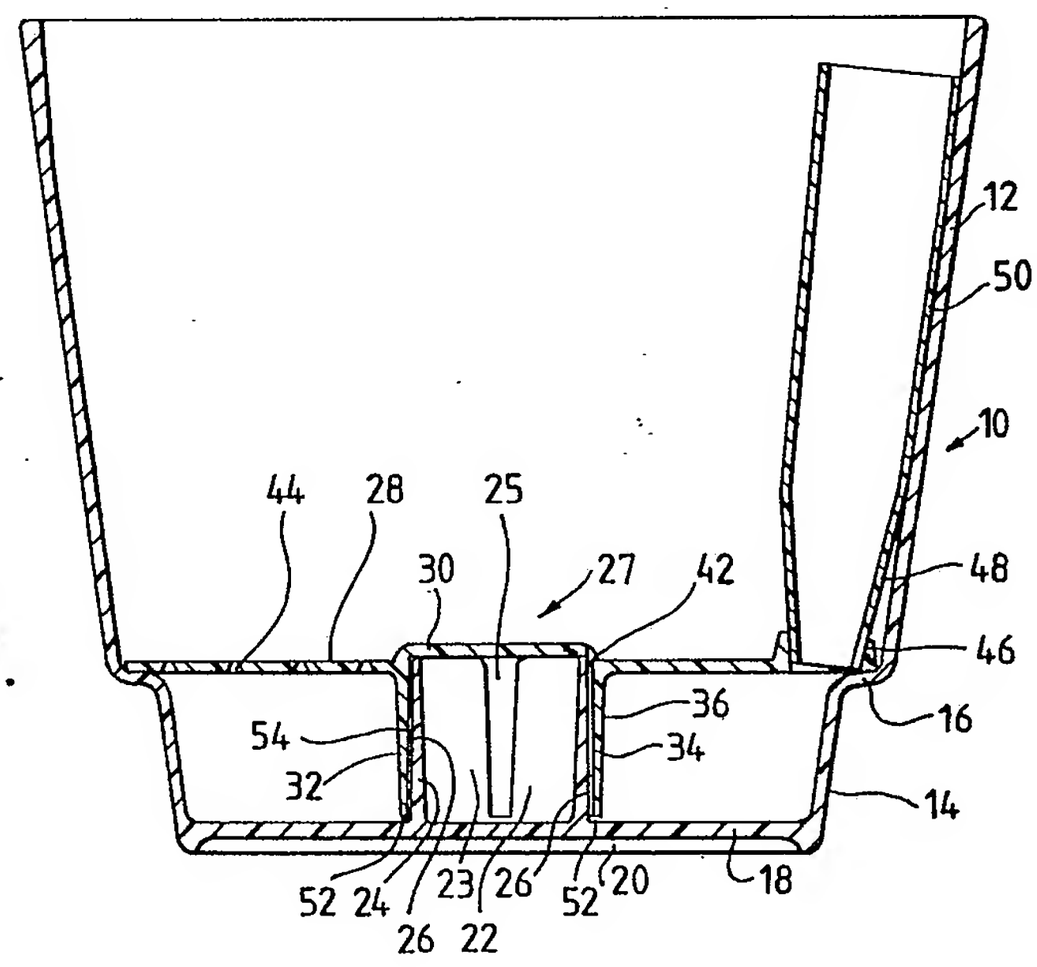

Fig.2.

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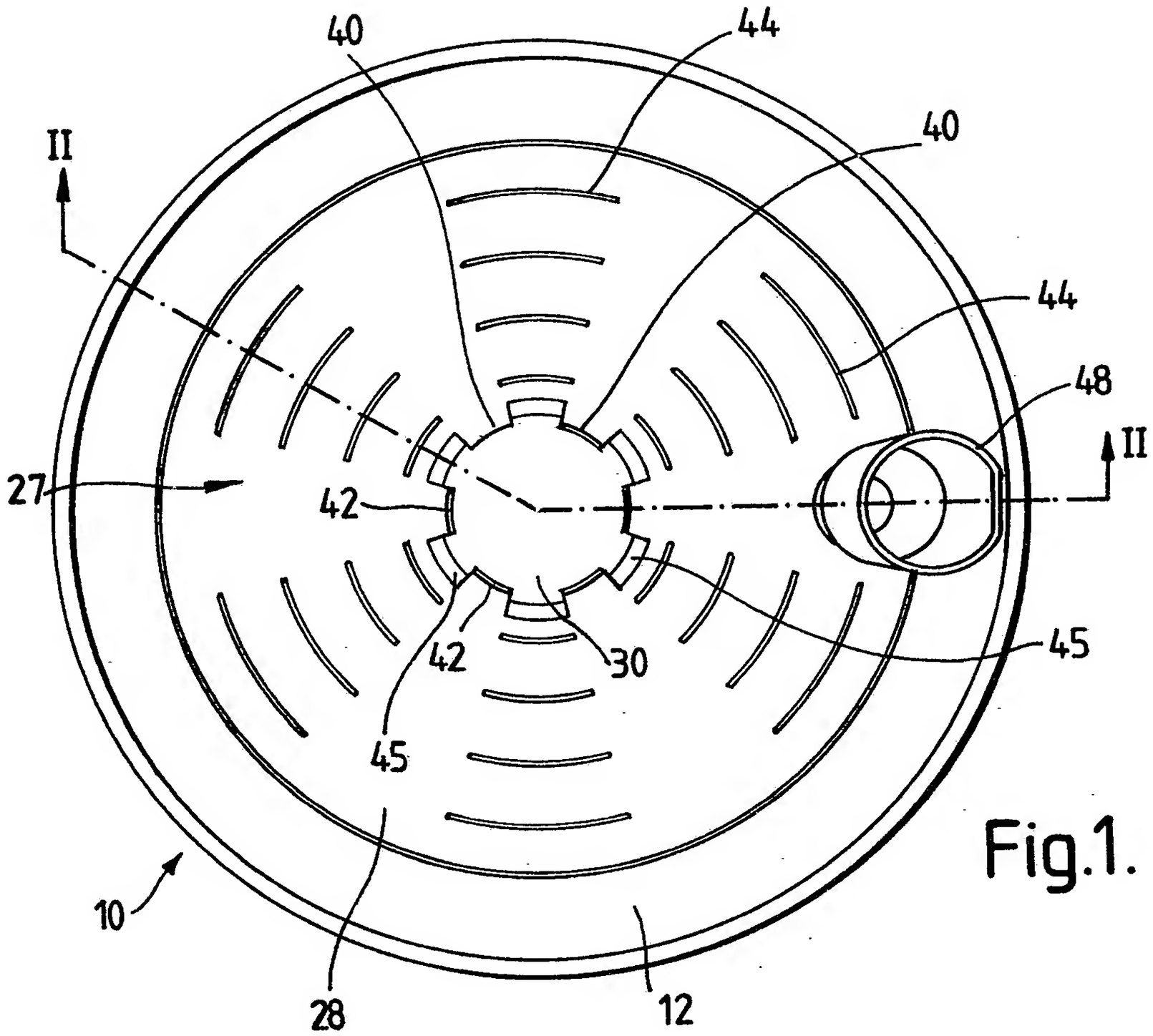
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Fig.1.

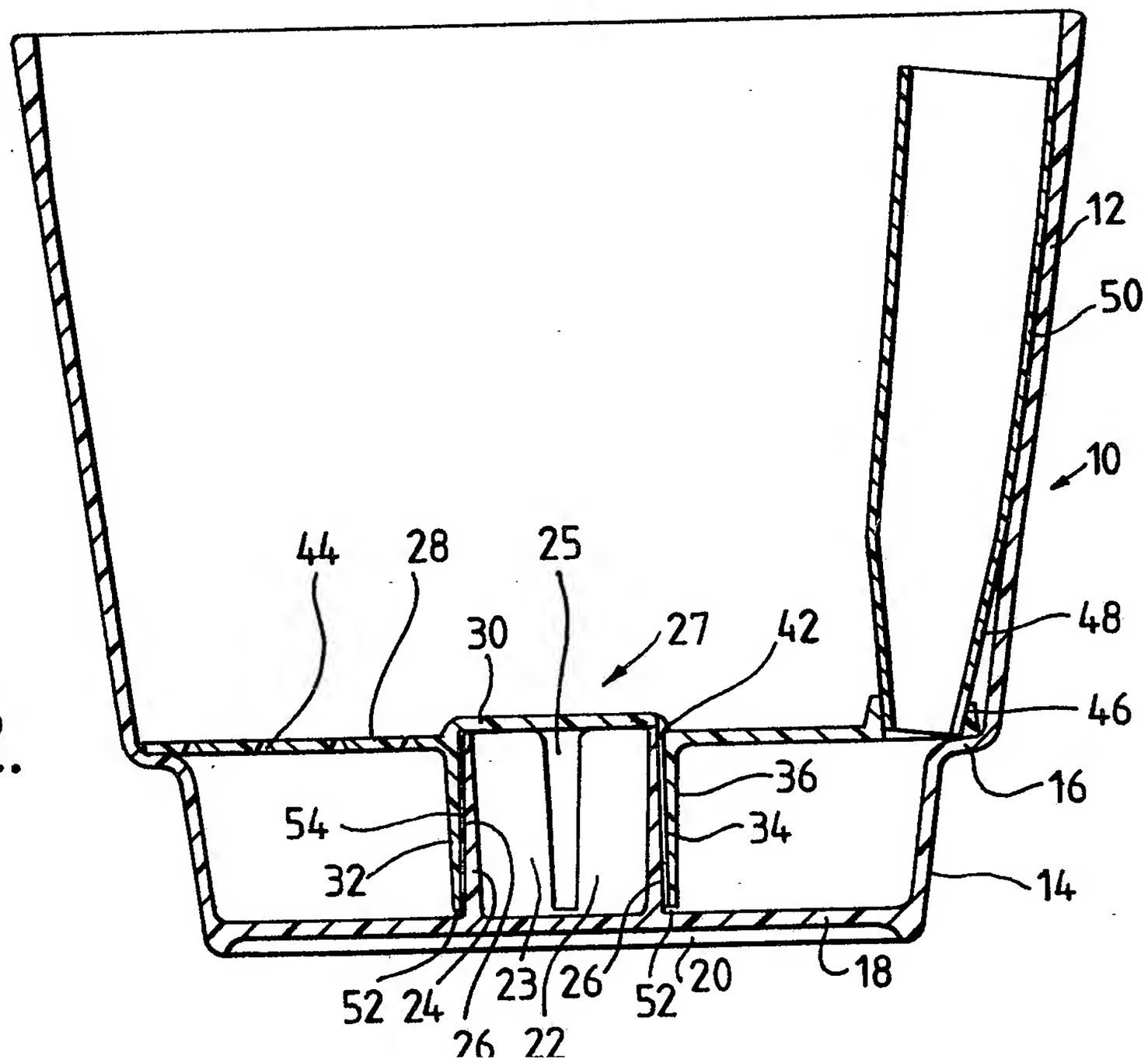
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Fig.2.

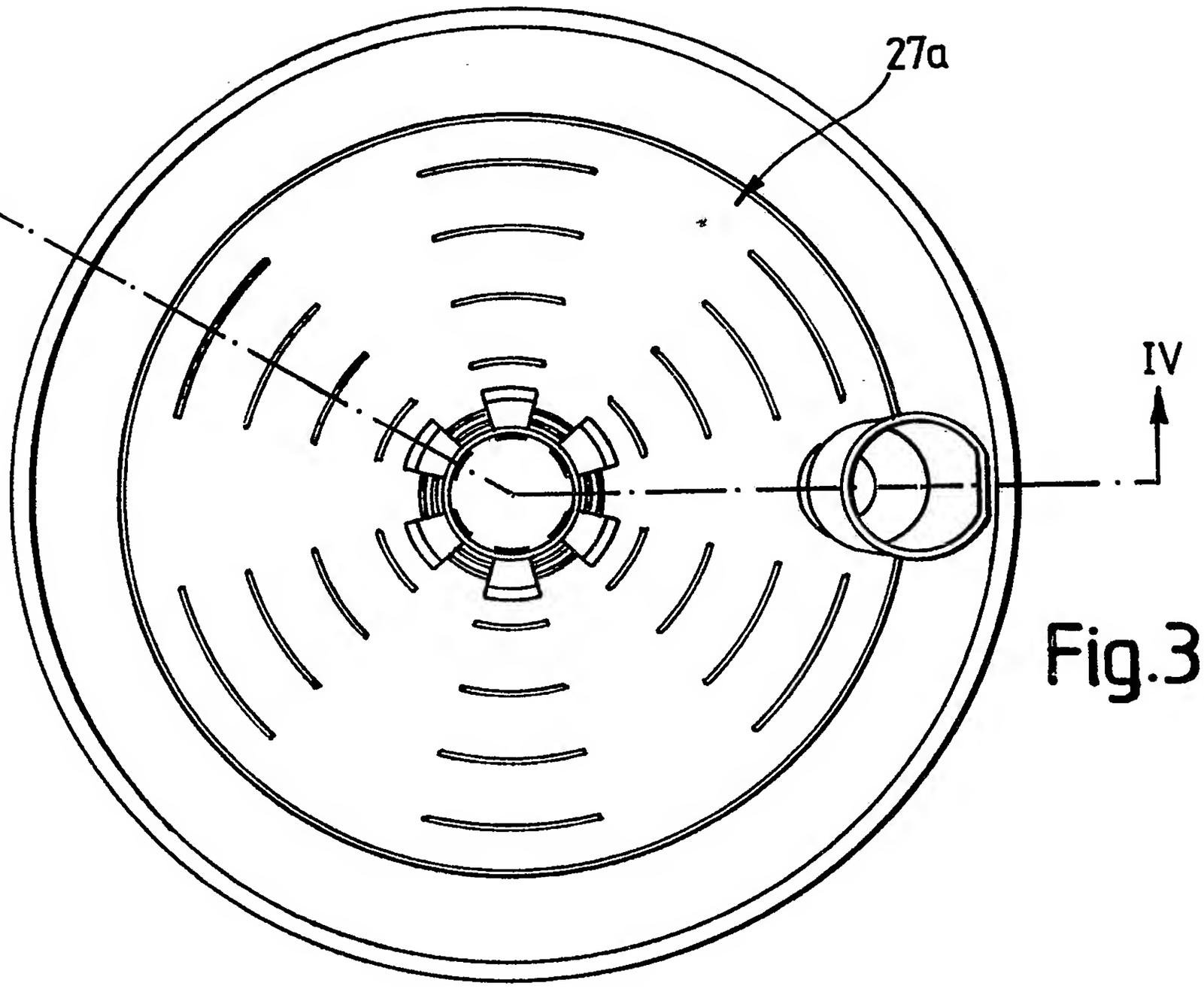

Fig.3.

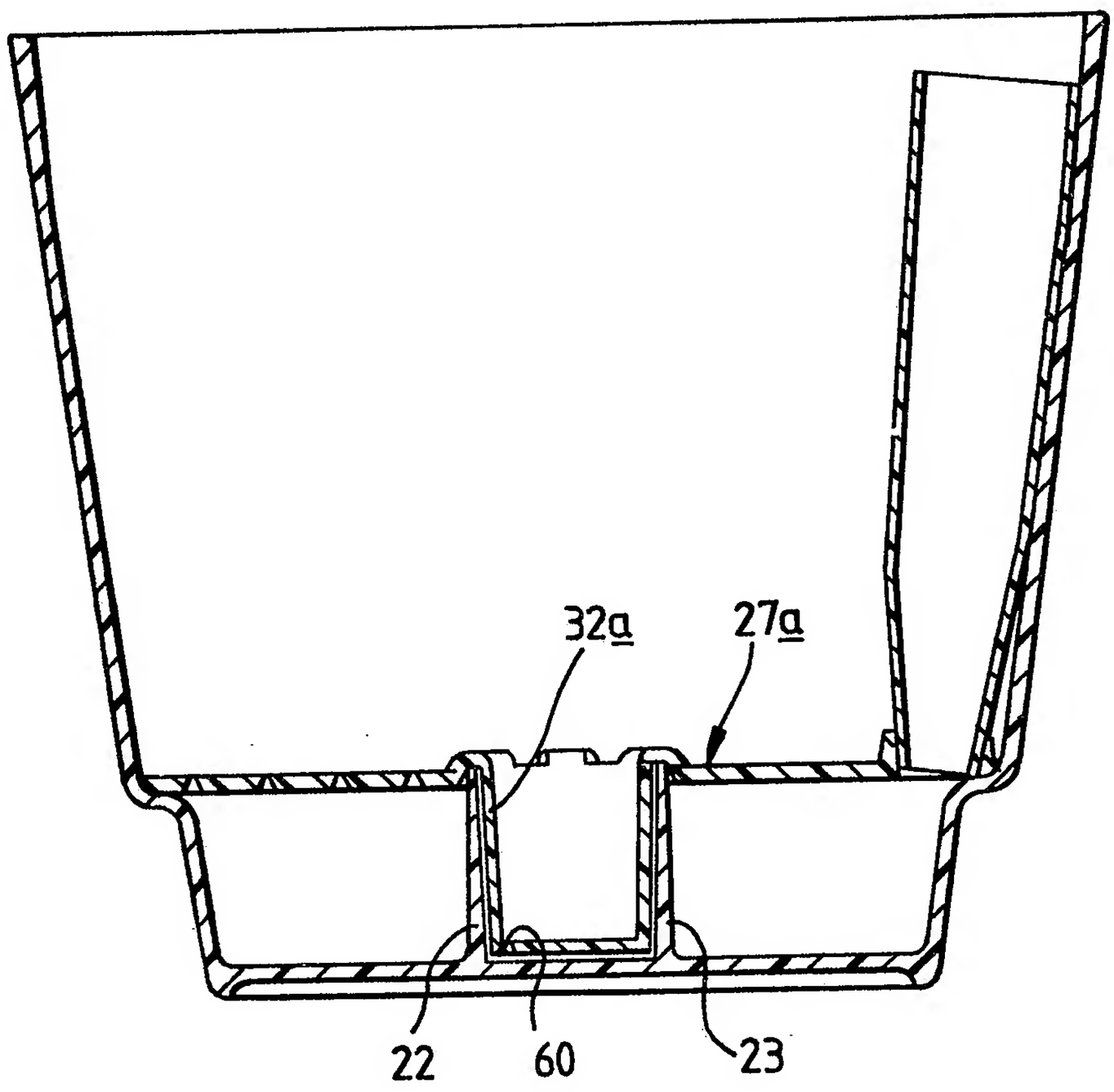

Fig.4.

SPECIFICATION

Plant pots

The invention relates to plant pots, and in particular to plant pots which automatically water a plant.

When a plant in a conventional plant pot is watered, the plant can only absorb so much water before the water drains through the soil and through holes in the base of the pot. Thus the soil becomes dry again, and the plant needs re-watering fairly soon afterwards. Attempts have been made to make a self-watering plant pot by provision of a wick to transfer water to the soil in the plant pot. I have now devised an alternative self-watering plant pot which dispenses with a wick.

Accordingly, the invention provides a container for growing plants, comprising a portion for containing soil and means to supply the soil containing portion with water, the supply means having a capillary passage to conduct the water.

The capillary passage may be formed between two members.

The two members may comprise a spigot and a socket.

The capillary passage may be formed between the walls of the spigot and the socket.

At least one spacer, for example a lug, may be provided to maintain the capillary passage.

The base of the soil containing portion may be a partition which is held in position above the base of the plant pot by at least one of the members which form the capillary passage.

A water reservoir may be provided below the soil containing portion.

There may be at least one hole in the soil containing portion which allows excess water to drain from that portion.

The hole may lead to the water reservoir.

The hole may be in the base of the soil containing portion.

The hole may comprise a slot.

There may be a passage for supplying the water reservoir with water.

The passage may be provided by a tube which passes through the soil containing portion.

By way of example, specific embodiments of the invention will now be described, with reference to the accompanying drawings, in which:—

Figure 1 is a plan view of a first embodiment of plant pot according to the invention;

Figure 2 is a view looking in the direction of arrows II—II in Figure 1;

Figure 3 is a plan view of a second embodiment of plant pot according to the invention; and

Figure 4 is a view in the direction of arrows IV—IV in Figure 3.

Referring firstly to Figure 2, a plastics plant pot 10 comprises an upper frusto-conical shell 12 and a lower narrower frusto-conical shell 14 beneath the first, the two shells being joined by a shoulder 16. The lower frusto-conical shell 14 is closed off at its lower end by a circular base 18. The base is provided with an exterior peripheral rim 20 on which the plant pot stands when in use.

Projecting from the base 18 into the plant pot are two upstanding arcuate flanges 22, 23. The flanges are in the form of a thin upstanding tube which is cut away at two locations 25 to form the flanges. The flanges 22, 23 are shaped to taper upwards slightly when seen in cross-section, outer walls 26 being perpendicular to the base 18.

As seen in Figures 1 and 2, an inner partition 27 comprises a circular disc 28 with a raised central circular portion 30. The diameter of the disc 28 is substantially the same as the narrowest diameter of the upper shell 12, i.e. just above the shoulder 16. Extending downwards from the undersurface of the periphery of portion 30 is a circular tube 32. The inner walls 34 of this tube are perpendicular to the disc 28 and the walls themselves taper downwards slightly. The radius of the tube 32 is slightly larger than the radius of the tube of which the flanges 22, 23 form part. The length of the tube 32 is slightly shorter than that of the flanges 22, 23.

The central circular portion 30 has a bevelled edge and is cut away at six evenly spaced peripheral locations to provide six evenly spaced gaps 40. These gaps provide six narrow, curved slots 42 extending through the inner portion 26, since the undersurface of central portion 30 is above the upper surface of the disc 28. The outer periphery of slots 42 is provided by the inner wall 34 of tube 32 where the tube 32 meets central portion 30. Thus, the upper and lower surfaces of the partition 27 communicate with one another by means of slots 42.

The disc 28 is provided with a plurality of narrow arcuate slots 44, and these subtend portions 45 of the central circular portion 30 which are not cut away to provide gaps 40. As seen in Figure 2, the width of these slots increases with depth. These retain soil in the pot while allowing slow drainage of water into the lower shell 14. A hole 46, reinforced around its periphery is provided at the outer periphery of disc 28. In use, this hole receives a tapered tube 48 which fits sealingly into hole 46 and is shaped, for example at 50, to lie snugly against the inner wall of the first frusto-conical shell 12.

In use, the inner partition 27 is positioned so that the undersurface of central portion 30 rests on the upper rims of flanges 22, 23. The inner partition 27 is made so that in this position, the periphery of disc 28 is seated on the shoulder 16. Since the tube 32 is shorter than the flanges 22, 23, gaps 52 are left underneath the rim of tube 32. Moreover, since the radius of tube 32 is slightly larger than the radius of flanges 22, 23, gaps 54 are left all the way round the flanges, between the outer walls 26 of the flanges 22, 23 and the inner wall 34 of the tube 32, and the tube 32 and the tube of which the flanges form part are co-axial. The inner radius of tube 32 is only slightly larger than the outer radius of flanges 22. The tube and the flanges are spaced apart by small lugs (not shown) on the flanges 22, 23.

When the upper partition 27 is in position soil is placed inside the upper shell 12 of the plant pot and rests on the inner partition 27. Water is poured down the tube 48 into the lower shell 14. By capillary action, water is drawn up via the gaps 52 into the gaps 54 inbetween the flanges 22, 23 and the tube 32, since the flanges and the tube are only slightly separated. The gaps 54 and the water therein, communicate with the soil in the upper shell 12 by means of slots 42 extending through the inner partition 27 and thus the soil is provided with water. The water then spreads through the soil by more capillary action and is absorbed by the roots of a plant in the soil. Any excess water absorbed by the soil will not remain in the soil but will drain away through the arcuate slots 44 back into the base and may be re-used. Thus, once water has been poured into the lower shell 14 the plant in the pot need not be watered for some considerable time, since water will be continuously drawn up to the soil by capillary action between the flanges and the tube.

Figures 3 and 4 show a second embodiment of the invention, generally similar to the first embodiment, but differing in that the tube 32*a* of the inner partition 27*a* is in use situated inside the flanges 22, 23 so that the capillary gap is between the outer wall of the tube 32*a* and the inner wall of the flanges 22, 23. The base of tube 32*a* is closed off but is provided with a hole 60 to allow water which has drained from the soil into the tube 32*a* to be at the same level as the water in the shell 14.

The invention is not restricted to the details of the foregoing embodiments.

CLAIMS

1. A container for growing plants, comprising a portion for containing soil and means to supply the soil containing portion with water, the supply means having a capillary passage to conduct the water.

2. A container as claimed in Claim 1, in which the capillary passage is formed between two members.

3. A conductor as claimed in Claim 2, in which the two members comprise a spigot and a socket.

4. A container as claimed in Claim 3, in which the capillary passage is formed between the walls of the spigot and the socket.

5. A container as claimed in any one of Claims 2 to 4, in which at least one spacer is provided to maintain the capillary passage.

6. A container as claimed in Claim 5, in which the or each spacer comprises a lug.

7. A container as claimed in any one of Claims 2 to 6, in which the base of the soil containing portion is a partition which is held in position above the base of the plant pot by at least one of the members which form the capillary passage.

8. A container as claimed in any one of the preceding claims, in which a water reservoir is provided below the soil containing portion.

9. A container as claimed in any one of the preceding claims, in which there is at least one hole in the soil containing portion which allows excess water to drain from that portion.

10. A container as claimed in Claim 9 when dependent on Claim 8, in which the hole leads to the water reservoir.

11. A container as claimed in Claim 9 or Claim 10, in which the hole is in the base of the soil containing portion.

12. A container as claimed in any one of Claims 9 to 11, in which the hole comprises a slot.

13. A container as claimed in Claim 8, or any one of Claims 9 to 12 when dependent directly or indirectly on Claim 8, in which there is a passage for supplying the water reservoir with water.

14. A container as claimed in Claim 13, in which the passage is provided by a tube which passes through the soil containing portion.

15. A container for growing plants, constructed and arranged substantially as herein described, with reference to figures 1 and 2 or figures 3 and 4 of the accompanying drawings.

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NAME	COUNTRY
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ABSTRACT:

CHG DATE=19990617 STATUS=O> A plant pot 10 comprises a soil- containing portion 10 and a water reservoir portion 14. Formed integrally with

and extending upwardly from the base of the reservoir portion 14 are two arcuate flanges 22, 23. A removable partition 27 separates the soil containing portion 10 and the water reservoir portion 14 and comprises a disc 28 with a plurality of perforations 44. Extending downwardly from the disc is a tube which fits over the flanges 22, 23 leaving a small gap 54 between the flanges and the tube. When the reservoir is supplied with water via a tube 48 which passes through the soil and the portion 27, water is drawn into the gap 54 by capillary action, communicates with the soil through gaps 42 in the partition 27, and the soil is thus watered. Excess water in the soil drains back into the reservoir portion 14 through the perforations 44 in the disc 28. Alternatively, the tube 32a extending downwardly from partition 27 may be arranged to fit inside the flanges 22, 23. □